



CASE HISTORY

Fluoropolymer Lined Projects

1988 - 2019

Ref.	Client	Equipment	Dimensions	No.	Media	MOC	Lining material	Opp. Temp	Opp. Press	Scope of work	Delivered
12286	3M Zwijndrecht	Lined piping	4", 2" and 1"	315	Chemical application	CS	PTFE black (antistatic)			Complete steel and lining	2019
12198	BASF De Meern	Lined piping	DN25 - DN40 - DN50	95	Chemical application	CS+B4A4 0:G40	PTFE			Complete steel and lining	2019
12326	Shell/ Teblick	Tower parts	5x1,5m	3	Chemical application	SS316L	TFM 3,0mm			Lining only	2019
12348	Tectrion	Iso-Tank	20m ³	2	Chemical application	CS	ECTFE bonded 2,3 mm	Amb.		Lining only	2019
12115	BASF/IVW	Iso-Tank	14m ³	1	Chemical application	CS	PFA bonded 2,3mm	Amb.		Lining only	2019
11828	BASF/IVW	Iso-Tank	20m ³	1	Chemical application	CS	PFA bonded 2,3mm	Amb.		Lining only	2019
11846	NXP / lamers	Lined piping	1" – 2"	131	Chemical application	CS	PFA/PTFE			Complete steel and lining	2019
11725	Vinnolit	Lined piping	DN50 – DN80 – DN100	165	Chemical application	CS	PFA/PTFE			Complete steel and lining	2018
11420	MSD	Lining Bassin		2	Chemical application		ECTFE			Lining only	2018
10735	FEP Shelman	Dippipe	4" x 36"	1	Chemical application	CS	PFA			Complete steel and lining	2018
11547	Proviron NV	Column	DN400	1	Chemical application	CS	ETFE Ultra		Vacuum	Complete steel and lining	2018

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11826	BASF/IVW	Iso-Tank	14 m3	1	Chemical application	CS	PFA			Lining only	2018
11595	IVW	Iso-Tank	19 m3	2	Chemical application	CS	PFA			Lining only	2018
11410	Hoyer/IVW	Iso-Tank	23 m3	1	Chemical application	CS	PFA			Lining only	2018
11266	Johnson	Storage tank T695 & lined piping		150	Chemical application	SS316L	PFA/PTFE			Complete steel and lining	2018
11211	KMG	Storage tank		1	Chemical application	CS	PFA			Complete steel and lining	2018
11156	Hoyer	Iso-Container	23 m3	1	Chemical application	CS	PFA			Lining only	2017
11284	Acssys	Lined piping	DN50 – DN80	200	Chemical applications	CS	PFA/PTFE				
10999	Eastman	Opslagtank D-210		1	Chemical application	CS	PFA	130°		Lining only	2017
10724	Huntsman	Opslagtank					ETFE				2016
14014	FB process equipment BV	1500 piping components	Different sizes	1500	Chemical application	CS	PTFE/PFA	80°	Atmos	Complete steel and lining	2016
10386	IVW Itiniris project	Peroxide storage tanks	380x12000mm	4	Chemical application	SS316	PFA	Not given	Atmos	Complete steel and lining	2016
14014	FB proces equipment	Butter Vessel	150x300m	1	Chemical application	CS	ETFE	80°	Atmos	Complete steel and lining antistatic	2015

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11528	Currenta	Ducting	Diam 1300mm	3	Chemical Application	GRP	PP	Not Given	Vacuum	Connectin g pvdf inner liner	2014
11456	ICL	Injection head	80x1500mm	2	Not given	SS	PTFE	Not given	Atmos	Injection head	2014
11411	Gema	Loading equipment	1500x900mm	2	Not given		PVDF	Ambient	Not given	Full Pvdf equipment	2014
11153	Eastman	Reaction Vessel	2500mm x 2100mm	1	Not given	CS	FEP	80°	6 barg	Relining free issue steel	2013
11203	Mersen	Bottom flanges	1200mm	4	Chemical Application	CS	PFA	Not given	Atmos	Complete steel and lining	2013
10918	Merck / Iww	Iso-Container	2500mmx	2	Chemical Application	SS	PE	H2SO4	Atmos	Lining free issue steel	2013
			5600mm								
10900	Mersen	Dip pipe	4900mm	1	Chemical Application	CS	PTFE	Not given	Atmos	Complete steel and lining	2013
10838	Mersen	Doors	1500mmx	2	Chlorine	CS	PFA	Not given	Not given	Lining free issue Steel	2013
			1000mm								
10743	Mersen	Vessel covers	1200mm	2	Chemical Application	CS	PFA	180°	Not given	Line free issue Steel	2013
10631	Solvay Thailand	Dip pipe	6000mm	1	Chemical Application	SS	Ptfe AS	150°	Not given	Complete steel and lining	2012

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10506	Solvay / Hoyer	Iso-container 20ft	2500mm x 5500mm	1	Ammoniac	SS	PFA	Amb	Atmos	Line free issue Steel	2012
10427	Basf/ Iwv	Iso-container 20ft	2500mm x 5500mm	1	Peroxide	SS	Ptfe	Amb	Atmos	Relining / repair modified PTFE	2012
10419	Lanxess / Iwv	Storage tank	1800mm x 1020mm	1	Chemical Application	C/Steel	PVDF	70°	Atmos	Relining used Tank	2012
10064	Scharf	Storage tank	2500mm x	1	Sulfuric	C/Steel	ECTFE	80°	3 barg	Line free issue	2012
			5600mm		Assid					Steel	
1026	Ato-Fina / Alteco	Storage vessel	2500mm x 7230mm	1	Confidential	C/Steel	FEP	60°	3 barg	Line free issue steel	2012
9566	Solvay / Iwv	Iso-container	2500mm x	1	Peroxide	C/steel	PFA	Amb	Atmos	Line free issue	2011
			5500mm								
9641	Evonik	Nikkel tank Cover	3500 mm diam	1	Chemical application	Nikkel	PFA	Not given	Not	Lining+ste el	2011
9744	Solvay / IVW	Iso-container	2500mm x 1000mm	1	Peroxide	C/steel	Ptfe	Amb	Atmos	Lining+ste el	2011
9735	Mersen	Doors	1500mm x 1000mm	2	Chemical application	C/Steel	PFA	Not given	Not given	Lining+ste el	2011
9795	Steuler	Absorption tower	1600mm x 7230mm	1	Chlorine	C/Steel	Ectfe	80°	3 barg	Lining+ste el	2011
9792	Thissen Krupp	Storage vessel	2800mm x 5800 mm	1	Chlorine	C/steel	Ectfe	80°	3 barg	Lining+ste el	2011
9842	Momentive	Chlorine diffuser	4800mm x 4000mm x	1	Chlorine	Hastalo	Ectfe Halar	120°	Not given	Lining+ste el	2011
9900	Mersen	Scrubber	2100mm x 1300mm	2	Chemical application	C/Steel	Etfe	80°	4 barg	Lining+ste el	2011

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9145	Eastman /Mcl	Catalysator Vessel	2500mm x 2100mm	1	Not given	C/steel	FEP	80°	4 barg	Lining+steel	2010
7644	Basf /IVW	Iso-container	1600mm x 5500mm	1	Semicon Application	C/steel	PvdF	Amb	Atmos	Lining+steel	2008
7331	Bayer/IVW	Gas Ducting	4000mm x 5000mm	2	Fluegases	C/steel	PP	Amb	Atmos	Lining+steel	2007
7343	Solvay	Iso- container	2500mm x 5500mm	1	Peroxide	C/steel	PFA	Amb	Atmos	Lining+steel	2007
7435	Basf / Iwv	Iso- container	2500mm x 5500mm	1	Semicon Application	C/Steel	PFA	Amb	Atmos	Lining	2007
5082A	Bayer/ IVW	Gas Ducting	9000mm x 2300	2	Fluegases	C/steel	PP	Amb	Atmos	Lining	2006
5082	Bayer/	Rotation wash- Unit	2500mm x 600mm	2	Fluegases	C/steel	PP	Amb	Atmos	lining	2005
1869	Fina	Storage tank	2200mm x 7320mm	1	Chemical application	C/steel		120°	4.9 barg	Lining	2003
5604	LVM Holland	Reactor vessel	850mm dia x 1400mm t/t	1	Chemical application	C/steel	FEP	Not given	Not given	Strip & re-line free issue steel	2001
5846	EVC	Flue gas outle	800mm dia x 2500mm t/t	1	Flue gases	C/steel	PFA	280°	300mbar	Lining	2001
5387	Birwelco	Storage vessel	17000mm dia x 9000mm t/t	1	Brominated water	C/steel	PVDF	Amb	Atmos	Supply & install lined vessel	2001
5455	Com	Road tanker	1850mm dia x 10000mm t/t	1	Confidential	S/steel	PP	50°	3 barg	Lining	2001

Ref.	Client	Equipment	Dimensions	No.	Media	MOC	Lining material	Opp. Temp	Opp. Press	Scope of work	Delivered
5586	BNFL	High U tank	2500mm h x 7000mm long	1	HF & Uranium	N/a	PP	50°	6 barg	Lining	2001
5844	BNFL	High U tank	2500mm h x 7000mm long	1	HF & Uranium	N/a	PVDF	50°	6 barg	Design, manufacture, install vessel	2001
5724	Ineos Chlor	Stripping column	1100mm dia X 15000mm t/t	1	HCL	C/steel	PTFE	Not given	Not given	Lining	2001
4776	BNFL	Off gas stock tank number 2	1800mm dia x 3000mm t/t	1	Hydrofluoric acid 66%	C/steel	FEP	Amb.	-0.1 to 2 barg	Line free issue vessel	2000
4016	Rhodia	ISO tank container	2500mm dia x 5500mm t/t	1	High Purity HCL	S/steel	PFA	50°	3 barg	Line free issue steel	2000
4403	ICI	Wet collection dryer	610mm dia x 1870mm t/t	1	Not given	C/steel	ECTFE & FEP	50°	3 barg	Line free issue steel	2000
4351	Rhone Poulenc	Aqueous waste tank	7500mm L x 3500mm W x 2500mm H	1	Waste / Effluent	C/Steel	PVDF	60°	Atmos.	Design, fabricate steel, line, paint, test, and deliver complete	2000

Ref.	Client	Equipment	Dimensions	No.	Media	MOC	Lining material	Opp. Temp	Opp. Press	Scope of work	Delivered
4556	LVM Holland	Storage vessel	1600mm dia x 6200mm t/t	1	Ethylenedichloride	C/steel	ECTFE	70°	12.6 barg	Lining	2000
5105	Rhodia	ISO Tank container	2500mm dia x 5500mm t/t	1	High purity HCL	S/steel	PFA	50°	3 barg	Lining	2000
3288	Milliken & Co.	Radio Frequency tube	6000mm x 800mm x 300mm	1	Textiles	GRP	FEP	100°	4 psi	Design, draw, and fabricate RF tube	1999
1235	BNFL	Off gas stock tank	1800mm dia x 3000mm t/t	1	Hydrofluoric acid 66%	C/steel	FEP	Amb.	-0.1 to 2 barg	Lining	1999
3316	Mitchell Cotts	Methanolic Filtrate storage	3000mm dia x 6000mm t/t	1	Solvent	S/steel	E-CTFE	30°	30/-5 mbar	Lining	1999
3316	Mitchell Cotts	Hexane storage tank	2000mm dia x 3500mm t/t	1	Hexane	S/steel	E-CTFE	30°	40/-5 mbar	Lining	1999
3316	Mitchell Cotts	Aqueous effluent storage tank	3000mm dia x 6000mm t/t	1	Effluent	S/steel	ECTFE	30°	30/-5 mbar	Lining	1999
3316	Mitchell Cotts	Methanolic distillate storage tank	3000mm dia x 6000mm t/t	1	Solvent	S/steel	ECTFE	30°	30/-5 mbar	Lining	1999
3354	ICI	Organics storage vessel 2	1700mm dia x 5200mm t/t	1	Methylene chloride, chloroform, water	C/steel	ECTFE	5°	100 mbarg	Lining	1999

Ref.	Client	Equipment	Dimensions	No.	Media	MOC	Lining material	Opp. Temp	Opp. Press	Scope of work	Delivered
3195	ICI	HCL Relief KO Pot	1200mm dia x 3725mm long	1	HCL 20%	C/steel	ECTFE / PTFE	Amb.	Atmos.	Lining	1999
3893	ICI	Water scrubber circ	1200mm dia x 1800mm t/t	1	Chemical application	C/steel	PP	60°	3.5 barg to f.vac	Lining	1999
3983	ICI	Primary wash mixing tank	1000mm dia x 1000mm t/t	1	Organics	C/steel	PVDF	N/A	N/A	Lining	1999
3085	Varichem	Open topped mixing vessels	1100mm dia x 1000mm t/t	3	Various	C/steel	FEP	50°	Atmos	Lining	1999
3300	ICI	Drying still column	1150mm dia x 7820mm t/t	1	Chemical application	C/steel	PTFE	110°	2.14 barg	Lining	1999
3318	Rhodia	HF Pre-scrubbing column	1000mm dia x 5900mm t/t	1	HF	Incolloy	PTFE	180°	1.0 barg	Lining	1999
3379	Italprotec	Reactor cones	1000mm dia x 1500mm long	2	Not given	C/steel	PTFE	Not given	Not given	Lining	1999
3661	ICI	Vent gas scrubber	300mm dia x 3500mm t/t	1	Chemical application	C/steel	PTFE	80°	4 barg	Lining	1999
3673	Millenium Inorganics	Bag filter discharge column	600mm dia x 2500mm t/t	1	Chemical application	C/steel	PFA	Not given	Not given	Supply complete lined	1999
3709	Fibracon	Slider plates	1100mm wide x upto 2400mm long	89	Not Applicable	C/steel	PTFE	Amb	None	Line free issue steel	1999
3748	ICI	Reaction vessel	800mm dia x 1500mm t/t	1	HF, Oleum, hydrofluoric	C/steel	PTFE	175°	10" wg vac	Line free issue steel	1999

Ref.	Client	Equipment	Dimensions	No.	Media	MOC	Lining material	Opp. Temp	Opp. Press	Scope of work	Delivered
3805	Novartis	Flue ducting	250mm dia x 280m long	num	Flue gas	GRP	FEP	Not given	Not given	Manufacture complete	1999
4323	BNFL	Off gas stock tank	1800mm dia x 3000mm t/t	1	HF 66%	C/steel	FEP	Amb	-0.1 to 2 barg	Line free issue vessel	1999
2556a	Christ AG	H2 SO4 storage tank	2300mm dia x 3500mm t/t	1	80% high purity sulphuric acid	C/steel	PFA	140°	6 barg	Line free issue vessel	1998
2556b	Christ AG	H2 SO4 circulation tank	1400mm dia x 3500mm t/t	1	35% sulphuric acid	C/steel	PVDF	35°	6 barg	Line free issue vessel	1998
1322	Rolls Royce	Polisher vessels	1400mm dia x 1800mm t/t	8	Ultra-pure de-mineralised water	C/steel	PVDF	Amb.	9 barg	Line free issue vessels	1998
1774	ICI	Chlorine cell end plates	1000mm x 500mm	48	Chlorine	C/steel	FEP and PTFE	N/A	N/A	Bond FEP liners to steel. Machine and fit	1998
2003a	Kvaerner / ICI	Water scrubber column	800mm dia x 9200mm high	1	Confidential	C/steel	PTFE	40°	0.03 barg	Design, draw, fabricate and line vessel	1998

Ref.	Client	Equipment	Dimensions	No.	Media	MOC	Lining material	Opp. Temp	Opp. Press	Scope of work	Delivered
2003b	Kvaerner / ICI	Caustic scrubber column	800mm dia x 10700mm high	1	Confidential	C/steel	PTFE	39°	0.02 barg	Design, draw, fabricate and line	1998
2003c	Kvaerner / ICI	Stripping column	800mm dia x 7000mm high	1	Confidential	C/steel	PTFE	40°	0.3 barg	Design, draw, fabricate and line vessel	1998
2003d	Kvaerner / ICI	Knock out pot vessel	500mm dia x 1250mm high	1	Confidential	C/steel	PTFE	-15 to + 110°	0.3 barg	Design, draw, fabricate and line	1998
2003e	Kvaerner / ICI	Effluent tank	1830mm dia x 1850mm t/t	1	Confidential	C/steel	FEP	30°	Atmos	Design, draw, fabricate and line	1998
2900	ICI	Organics storage vessel	1700mm dia x 5200mm t/t	1	Methylene chloride, chloroform, water	C/steel	E-CTFE	5°	100 mbarg	Lining	1998
2001	Shering Plough	ISO Tanker	1950mm dia x 2000mm t/t	1	Chemical application	S/steel	PP	N/A	N/A	Lining	1998
2495	EVC	Flash Column C805	750mm dia x 2750mm long	1	Aqueous effluents HCL, NAOH, EDC	C/steel	FEP, PTFE & PFA	105°	1.5 barg	Line vessel, design, manufacture, supply	1998
576	BNFL	Acid stock tank	1850mm dia x 3200mm high	1	Hydrofluoric acid	C/steel	FEP	20°	-0.1 to 2 barg	Lining	1997

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1119	ICI	HF pre-scrubbing tower	1500mm dia x 11000mm high	1	Hydrofluoric acid, sulphuric acid	C/steel	PTFE	160°	1.0 barg	Lining	1997
131	Croda Colloids	DMD Vat	4000mm dia x 6000mm length	1	Dilute hydrochloric acid + bone chippings	C/steel	PVC	Amb.	Atmos.	Lining	1997
0907a	ICI	Oxychlorination separator	2200mm dia x 6000mm t/t	1	Confidential	C/steel	PVDF	70°	7 barg	Lining	1997
0907b	ICI	Purge gas separator	500mm dia x 2000mm t/t	1	Confidential	C/steel	PVDF	70°	7 barg	Lining	1997
0907c	ICI	Wet vent header KO not	927mm dia x 2746 t/t	1	Confidential	C/steel	PVDF	80°	7 barg	Lining	1997
1348	Rhone Poulenc	CPA filter press discharge chute	2800mm x 2800mm x 7000mm	1	Copper Bromide, Sodium CB, organics	C/steel	PP	55°	Atmos	Design, draw, manufacture and install on site	1997
1315	ICI	Steam stripper feed tank	3000mm dia x 170mm t/t	1	Confidential	C/steel	PVDF	N/A	N/A	Strip and re-line free issue vessel	1997
1320	ICI	Drying still feed tank	2084mm dia x 2220mm t/t	1	CTF and organics	C/steel	PVDF	80°	Atmos	Strip and re-line free issue vessel	1997
90	BNFL	Decontamination vessels	1200mm dia x 1200mm high	6	Fluoroboric acid	PVDF	PVDF	90°	Atmos.	Design, fabricate.	1996

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316	ICI	Reaction vessel	800mm dia x 1500mm high	1	Sulphuric acid, Oleum, Hydrofluoric acid	C/steel	PTFE	175°	10"wg vac.	Line free issue vessel, design, fabricate PTFE support cage	1996
347	Rhone Poulenc	ISO transport container	2500mm dia x 5500mm t/t	1	98% high purity sulphuric acid	S/steel	FEP	20°	3 barg	Lining	1996
963	ICI	Organics receiver vessel	1800mm dia x 2850mm t/t	1	Hydrochloric hydrofluoric acid, organics	C/steel	PVDF	80°	0.1 barg	Strip and re-line free issue vessel	1996
215	ICI	Chlorine cell end plates	1000mm x 500mm	56	Chlorine	C/steel	PTFE	N/A	N/A	Machine and fit	1996
91	APV	Radio Frequency Cooker tube	3000mm x 300mm x 300mm	1	Food application	GRP	FEP	N/A	N/A	Design, draw, and fabricate RF tube	1996
70/on	Allied Colloids	Polymerization vessels	1800mm dia x 2000mm long	40	Acrylic acid monomer	GRP	FEP	-3 to +90°	Atm to full vac	Re-line dish ends	1995
901	Ballapur Ind.	Scrubber column	1500mm dia x 12000mm high	9	Phosphoric acid	C/steel	PFA	160°	2 barg	Design, fabricate, line	1995

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963	ICI	Drying still feed tank	2084mm dia x 2577mm high	1	CTF & organics	C/steel	PVDF	80°	1.5 barg	Strip existing lining and re-line free issue vessel	1995
111	Rhone Poulenc	Storage vessel	3400mm dia x 6500mm t/t	1	98% high purity sulphuric	C/steel	FEP	20°	3 barg	Line free issue vessel	1995
1723	GEA	Flu gas de-sulpherization chamber	3600mm x 2740mm x 1200mm	4	Sulphuric vapours	C/steel	PFA	160°	-78 mbar	Line free issue chambers	1988
1825	Rel. Petroleum India	Spent Caustic neutralisation acid tank	2775mm dia x 7500mm t/t	1	93% sulphuric acid	C/steel	ECTFE	65°	1 barg	Line free issue vessel on site in United Arab Emirates	1988
1813	Allied Colloids	Reactor vessel	2000mm dia x 7000mm length	1	Acrylic acid monomer	GRP	FEP	-3 to +90°	Atmos to full vac	Design, draw, manufactu	1988

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